# Patty: <br> An Exploration of the Sasquatch Seen in the Patterson/Gimlin Film 

## Slide Presentation

by
Christopher L. Murphy
Editing \& Consultation:
Todd Prescott


Roger Patterson (right) and Bob Gimlin directly after they filmed "Patty" in 1967. The film they took remains the best photographic evidence of sasquatch or bigfoot.
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## FILM ASPECTS

 The Patterson/Gimlin (P/G) film is a 16mm movie that has about 953 film frames, allowing about 58 seconds of viewing. The width of the picture portion of the film is 10 mm by 7 mm -close to the size of the smallest keys (top row) on your computer keyboard. The image of Patty seen within the picture portion is 1.2 mm in height-about the width of the eye on a standard sewing needle. (Image shown is greatly enlarged.)

## FILM DETAIL THRESHOLD

The film frames have a severe limit as to the details seen. When Patty is enlarged to about 96 mm in height-about the height of a standard coffee mug-what one sees with his/her naked eye is all that has meaning. In general, anything smaller than Patty's nose is too small to assign any meaning (i.e., identify it as some known object or feature).

Frame 352 of the P/G film.

## Extensive EnLargements of Film Frames



The P/G film frames can be greatly enlarged without loss of clarity. Here we see Dmitri Bayanov, who gave the sasquatch in the film the name "Patty," with an 8-foot enlargement of frame 350 made by the late Scott McClean.

It appears the density of the image in the movie film allows for extensive enlargement. However, the "size of the nose" rule still applies. Details smaller than the nose cannot be assigned any meaning.

## MORPHOLOGY



Sasquatch have been referred to as being gorilla-like. If we compare Patty to a gorilla from about the waist up, I think the two would be quite similar at a distance ( 100 feet or so), given they were seen to be about the same height. However, that is absolutely where the similarity would end because the rest of their bodies are totally different.
Gorillas managed to elude science until 1847, mainly because of their remote African habitat. North America has regions that are just as remote-perhaps even more so.

## SAGITTAL CREST ISSUE



An intriguing question is whether or not Patty has a sagittal crest (pointed head) as seen on gorillas.
The images shown here are the best available of Patty's head. It is evident that the degree of "head point" displayed changes from severe to basically non-existent.

It appears Patty has a normal head shape that is slightly pointed-not beyond that seen in humans-and that hair on the top of her head follows the contour and makes what is seen as a point in some cases.

A human skull with a slightly pointed head shape.


## HEAd SIzE

Patty appears to have a very large head in relation to her height. It is illustrated here that 5 head heights equal her walking height. If Patty were standing perfectly erect, we can add about one more head height, so the ratio would be about 6 to 1.

Adult humans have an average standing height ratio of about 8 to 1 . In other words, about 8 head heights equal the standing height. As humans get older, their head to height ratio increases. It stops at about age 25 with the 8 to 1 ratio. A child, around 10 years old, would have a ratio of 6 to 1. Patty, however, is far beyond a child.

## Head Position



The yellow bar is $42 \%$ of the red bar, so $42 \%$ of the head is below the top of the shoulders. This will naturally vary when the head is tilted back. However, there may be other factors at play here because not all film frames show this level of severity.

Patty's head position is, or can be, very low on the body, resulting in the "no neck" observation typical of many sasquatch sightings. This illustration shows that $42 \%$ of the head is below the shoulders. This condition is likely rare (if it exists at all) in human beings.

Although Patty can turn her head left or right to a reasonable degree, She has to turn her entire torso to get a full view of either extreme. We can see this in the film when she turns to look at Patterson and Gimlin.

## Distinctive Head Feature



Note: A color
adjustment, seen here, is needed to properly see the hair feature on Patty.

A human skull with large brow ridges. Note the hollow.

There appears to be a distinctive feature on Patty's forehead that is also seen on gorillas. When a primate has large brow ridges, a slight hollow is created right above the center of the ridges. As a result, the hair that grows in this hollow sort of fans out in different directions. The same thing would happen to a human with large brow ridges if there were hair in this area.

## PuFFED Cheek

What appears to be a puffed cheek on the right side (left in image) of Patty's face is the result of her cheek hitting her shoulder as she turned her head to look at Patterson and Gimlin. I have previously discussed the low head position, and what we see here is a direct result of such.

It might be noted that a low head position minimizes, or eliminates, having an exposed neck. As the neck is a very vulnerable part of the body in any sort of combat, not having one could be deemed an advantage.

## MANE

What appears to be long/thick hair between Patty's shoulder blades creates the illusion of a mane, as seen here. This hair, of course, has nothing to do with a mane.
Nevertheless, it does appear that Patty has odd hair patches of varying thicknesses all over her body.

We need to consider here that Patty has hair, not fur. Hair would reflect light differently than fur because it is not as uniform and does not have the same density. The bear image on the left illustrates the evenness and dense appearance of fur.

## SEmi-Profile \& Profile Images of Patty's Head





Note that the top of the head is essentially identical in the first three images. There are 26 frames from the first to the third image. What we see appears to be fairly long hair.


In the last image, the head has turned to the right and Patty is more directly in front of the camera. What was seen as long hair now appears quite short and seems to trace the shape of the head.


In images 1 to 3, the right shoulder and camera angle allow only a small part of the face to be visible. This changes in image 4 when Patty is more directly in front of the camera.


Ear area
Eye socket Possible mouth

Part of nose
Brow ridge


If Patty has the same facial proportions as the average human, then what is seen here applies.
A to E equals the head size
A to $B$ and $B$ to $E$ equal $50 \%$ A to $E$ B to C equals $50 \%$ B to $E$ C to D equals $50 \% \mathrm{C}$ to E D to E equals $50 \%$ C to $E$ The main concern is C to D . I believe this distance is much greater in sasquatch (nose is very short).

## NosE



Note the light reflection on the side of my nose.


Examples of ape-like noses. Would they reflect the light in the same way seen with Patty?

What we can see of Patty's nose is essentially just a white blob. What has happened here is the same as seen in the photograph of myself on the right. If this image were 100 feet or so away, the same sort of white blob would result. Light has obviously caught the side of the nose because it protrudes out considerably. We might conclude that Patty has a human-like nose rather than an ape-like nose as those seen here.

## LIPS

When Patty turned to look at Patterson and Gimlin, it appears she opened her mouth slightly; this was likely a "surprise" reaction. The same thing happens with humans. As a result, we can reasonably see the thickness of her upper and lower lips. Gorillas don't have lips of that nature, but chimp lips are similar.


Lips are more prominent (fleshy/larger) in human females than males. They are more prominent again in some human races. It has been observed that sasquatch use their lips to strip small leaves from branches. Could Patty's lips reflect that particular practice?

## BREASTS



What we see as likely female breasts are the only indication that Patty was female. Although there has been much controversy on the presence of female breasts (Patty was originally considered by some professionals to be male) better imaging now seems to support that such are definitely seen. Unfortunately, we cannot say with certainty that nipples are present. In the mid 1990s, I stumbled upon an unorthodox photographic process that resulted in the right nipple (left-facing) becoming quite evident. I discuss this below, strictly for interest. Officially, nipples are not seen.

## UNCONFIRMED BREAST NIPPLE

The best image I could produce that shows what appears to be a nipple was obtained from a film frame image printed in the report by Jeff Glickman entitled, "Toward a Resolution of the Bigfoot Phenomenon" (1998). I took a 35 mm photograph of the image and it came out showing details far beyond my expectations. I don't have a proper explanation for this, so cannot confirm that what is seen is as perceived. As stated, the right (left-facing) breast nipple appears to be quite evident including what seems to be an areola surrounding it. The left (right-facing) nipple/areola is also somewhat evident and serves to confirm the existence of both details. However, what we see is very close to, or slightly below, the film resolution detail threshold, so there is yet another caution.
Note: This entire discussion is really too speculative for inclusion in this paper. I have included it for interest and in hope that someone might have an explanation.

## Pectorals



In several film frames, odd bulges are seen in the region of Patty's pectoral muscles (directly below her chin). This could be just simple lighting and so forth; however, there might be another explanation. Pectoral muscles can be developed so that they appear as bulges when they are tensed. The extensively developed pectoral muscles of the male bodybuilder seen here demonstrates this. I could not find a suitable female example with this level of development; however, I am sure such exists.
A subsequent film frame, seen here, shows the same bulges, but now pushed in, and partially covered by the right upper arm.
Dense muscle of this nature, which would likely be all over Patty's body, might be the reason it is seemingly difficult to bring a sasquatch down with a rifle shot. Hunters claim to have shot and hit a sasquatch, but with little or no noticeable effect.

## HAND \& "Fingers" Issue

One of the film frames shows the right hand with what appears to be the thumb and spindly fingers spread apart, as seen here in the first image. All of the other frames show the hand with the digits grouped together, most in the way seen in the second image.

What appears to be a thumb in the first image is on the wrong side for the right hand. Both it and the spindly fingers are simply objects in the background or "noise" (note their relevant texture). They appear only on the high resolution prints taken directly from the original film. Any inference that they were added to the film has no credibility.

If the "thumb" and "fingers" in the first image were deleted, the hand would appear essentially the same as seen in the second image.

## FEET

The only image of Patty's entire foot is in one of the early film frames. We can see that it appears to curve slightly on the outside (little toe side) rather than on the inside (big toe side) as with humans. It also appears to have a thick sole. Based on the 14.5-inch footprints found at the film site, if they were made by Patty then the foot size as seen here (i.e., the complete foot) is about 15.8 inches long. The bright white to off-white color of the sole is the result of light reflection (i.e., too much light to see the true color).

Another early film frame shows the back of the heel on the right foot (second image). The light color of the heel contrasts with the surrounding skin, indicating that Patty would be termed as having dark skin. In other body areas, the skin seems to blend in with the hair, making it hard to differentiate. However, I doubt there would be hair in the heel area.

## Chimpanzee Foot Sole Comparison



Although we know that Patty's feet are not of the same configuration as those of a chimpanzee, the soles of both creatures appear to be very similar, as these images indicate.
Also similar is the way the hair flows over the foot and terminates at the thick sole.

This is not to imply that Patty is closely associated with or related to a chimpanzee. However, both are primates, and as they both would not have any sort of footwear, then the soles of their feet would likely develop in the same way (become very thick).

Comments have been made that Patty's foot soles appear to be artificial. This comparison totally dispels that assertion. The soles of her feet have become exactly as they should for a creature of this nature in its natural environment.

## The Blurry Foot

One of the film frames shows Patty's right foot extended and distorted by what is called "motion blur" (foot A). I have shown for comparison here a clear image of the left foot (registered) from a different film frame (foot B). We can see that the blurry foot is simply a photography problem. Unfortunately, some people suggest that the blurry foot is a hoax indicator, so this needs to be clarified.


Foot $\mathbf{A}$ in the image is 1.885 inches
Foot $\mathbf{B}$ in the image is 1.687 inches
Foot $\mathbf{A}$ is (1.885-1.678) 0.198 inches larger than foot $B$
Foot $\mathbf{A}$ is ( $0.198 / 1.678$ ) 11.7\% larger than foot B. (Proof: $1.687^{*} 1.117=1.885$
It is essentially impossible that a left foot be $11.7 \%$ larger than a right foot.
CONCLUSION: Foot A appears to be extended in length as a result of motion blur, because the film speed was slower than the foot movement at that moment. Consequently, the foot appears longer than it actually is.

## ARMS \& LEGS



The human figure and Patty have been made the same height here to illustrate the relative length of the arms and legs.

Proportionally, Patty has exceedingly long arms and very short legs in comparison with the average human. Arms of the length calculated would only occur in one out of 52.5 million people, and the leg length in one out of 1,000 people. For both
conditions to come together in the same human individual is virtually impossible.


In one of the film frames, we can see what appear to be tendons at the back of Patty's right leg. If one partially extends his/her own leg, these large tendons in the human body can be felt; they would not be visible if Patty were a person in a costume.

## HERNIATION



An unusual lump on Patty's right thigh may be a hernia (rupture in smooth muscle tissue through which a bodily structure/lump protrudes). The lump appears to fluctuate in appearance with leg movement, which is likely consistent with the condition. Hernias are a fairly typical human ailment, especially with athletes, but are also common with most mammals.

## BUTTOCKS

The hair on Patty's body is inconsistent as to its texture and thickness. In some places it is very thin. What we see on her buttocks is generally in line with what we would expect to see as a result of sitting down.
Although it is hard to differentiate between what is simply light hair covering and areas with hair that has been worn down or disturbed, I doubt that what we see would be evident in any sort of costume.

Patty's buttocks (top) compared to a gorilla's buttocks.

## HAIR SKIRTING



In one film frame sequence, Patty appears to have a skirting of long hair on her buttocks. However, what we see on her right buttock blends in with her left hand. We must assume that the skirting continues on her left buttock. Oddly, the skirting is only seen in a limited number of film frames. In all other frames it is so insignificant as to not exist. As a result, the skirting is obviously something to do with light and the specific angle of the image.

## STRANGE LINES



What appear to be strange lines on
Patty's thigh and buttock are associated with hair angle, fat under the hair, camera angle, and light. They are not always consistent in the different frames.
Speculation that these lines might have something to do with a costume is absurd.

We see similar examples of this type of illusion in photographs of other animals with short hair, such as that of a horse as seen here. Were this photograph taken at 100 or so feet and then enlarged, the hair patterns would likely be even more

## HEIGHT CONSIDERATIONS



One of the film frames was used to construct a scale model of the film site. The model clarifies Patty's proximity to the various objects seen.

It is highly unlikely we will ever know Patty's height beyond a doubt. There is absolutely nothing in her "plane" (the path she walked) that has known dimensions and can be proven to have been there at the time the film was taken. Had she stepped over a milk carton or even a soda bottle, for example, then an accurate calculation of her height could have been made.

Nevertheless, some remarkable work was done by Jeff Glickman, a forensic scientist, using a photo registration process that concluded Patty was about 7 feet, 3.5 inches tall (walking height).

Note: Details as to how Jeff Glickman established Patty's height are discussed below, along with other height aspects/considerations. The point that needs to be made here is that up to this time no process has been discovered to establish the height beyond a doubt. Work is being done to see if the type of film used and camera specifications can be used for a calculation.

## How Patty's Height Was Established

The following illustration is from the forensic report that established Patty's average walking height at 87.5 inches. I firmly believe the process used was well thought-out, and is the most credible way to determine the height.


In this illustration I have superimposed an image of the same man as shown above holding an 8-foot pole. It is seen that Patty is slightly above the 7 -foot mark (red line) Also, with this clearer image one can better appreciate Patty's size when compared to a man 6 feet, 1.75 inches tall. Roger

Patterson was about 1 foot shorter than the man here, so the contrast to him would have been very great.

## HEIGHT CALCULATION BASED ON FOOT SIZE

This film frame is considered the best to determine a height calculation based on the foot size. However, the foot toes are partly obliterated by foreground debris. As a result, one has to guess where the toes end.
Furthermore, in the past the 14.5-inch cast size was used in all cases. The net result was a height exaggeration (too high). In this illustration I have made the needed corrections with the result that Patty's height in this frame is about 80.71 inches. This height is about 5.8 inches shorter than that established by the photo registration because Patty is more stooped over (knee bend, body bend, head bend).


Note: The ground level was determined by the position of the wood fragment (red circle) in above image. This is necessary because Patty's left foot is obliterated by foreground debris, so we can't see the foot on the ground. If the ground level is not correct, then a height adjustment, plus or minus, would result.


Math:
Red box is 1.458 inches in image
Actual foot size is 15.8 inches
Ratio is $15.8 / 1.458=10.837$ inches per image inch
Blue box is 7.448 inches in image
Height is $7.448^{*} 10.837=80.71$ inches

## Using the Wood Fragment as a Ruler




The extremities of the fragment would not be visible in the film frame so they have been deleted for the purpose of the height calculation.

In the film, we see Patty step on a wood fragment, and I believe that same fragment was retrieved by René Dahinden. The full fragment is seen in several film frames, and although it is positioned on a slight angle, and is not perfectly clear, with adjustments it may be used as a "ruler" to determine Patty's height.
Using the fragment, the walking height of Patty in the second image above (repeated at left) is 90.73 inches. This falls in line with an AVERAGE walking height of 87.5 inches.

[^0]
## Walking Height/Standing Height Issue

Walking height varies considerably compared to standing height (fully erect, back against a wall). In humans it can be up to $8.5 \%$ shorter. The following illustration shows how Patty's walking height varied. Patty's calculated AVERAGE walking height was 87.5 inches. In the last image shown here, she was 2.6 inches shorter than the previous image.


MATH: Blue line in image 2.12 inches. Yellow box in image 0.062 inches; $87.5 / 2.12=41.274 ; .062 * 41.274=2.6$ inches
In the following illustration I have "straightened out" Patty in the first image to effect a possible standing height. She comes out with a standing height of 96.51 inches. I have included the hair on the top of her head, and if we subtract something for this and include an error factor,* | believe her standing height was very close to 94 inches.


MATH: Blue line in image 2.273 inches. Yellow line in image $2.061 ; 87.5 / 2.061=42.46 ; 2.273^{*} 42.46=96.51 ; 96.51-87.5=9.01$ inches (stoop)
Height analysis accuracy depends on the creature walking a perfectly straight line, always remaining at an equal distance from the camera. This is highly improbable, but any adjustment appears marginal and is part of the error factor. Also, the ground level is according to the wood fragment on the left. It may also need a marginal adjustment.

## PATTY'S DIMENSIONS

This early illustration by John Green shows his measurement calculations (white print). Subsequent research indicates the figures were larger (red print).


## How Much Did Patty Welch?



Patty's body totally compressed

A container made to fit the maximum dimensions of
Patty would fill to 36.68 of its capacity when she was compressed.

Patty's weight has been been a subject of considerable controversy. Forensic scientist Jeff Glickman determined that she weighed 1,957 pounds. I have determined that if her body had the same density as a human, then she weighed 932 pounds.

I used the following statistics from the Internet to arrive at this figure:

1. The average human body contains $5,064.97$ cubic inches of matter.
2. The weight of human matter is 0.584 ounces per cubic inch.
3. The average human is 66.6 inches tall, 17.6 inches wide and 11.78 inches thick (averages for men and women).

If a box is made for an average human body to the exact height, width and thickness (depth), the box would contain 13,808 cubic inches of space (66.6*17.6*11.78).

When we eliminate all the space in the box (compress the body) the matter will fill 36.68\% of the box (5064.97/13808).

A box made for Patty would be 95 inches long, 37 inches wide and 20 inches deep. It would contain 69,560 cubic inches of space (95*37*20). Given her matter would be $36.68 \%$, then we have 25,541.6 cubic inches of matter (69560*0.3668). At 0.584 ounces per cubic inch we arrive at 14,916.29 ounces. At 16 ounces per pound, we get 932.3 pounds.

It must be kept in mind that I have used the HUMAN factor for the weight of matter. I personally believe that Patty would, like a gorilla, have five times the muscularity of a human. This would likely greatly increase her matter density (weight). If it were twice that of a human, then her weight would come very close to that determined by Jeff Glickman.

## CLASSIFYING PATTY

We do not know what Patty is, other than she appears to be a primate. The popular opinion is that she appears to be humanrelated. The opinion of scientists (I don't have a percentage) is that she is a non-human ape (North American Ape). The following illustrations reflect the popular opinion. The skull model is my own interpretation. One could just as easily create something far more ape-like.
Patty's head as seen in Frame 339 of the
Patterson/Gimlin film compared with a skull model based on the film.

An enhanced version of the above head by Yvon Leclerc again compared with the skull model.


## What Can We Conclude from THIS PRESENTATION?

First off, it is important to understand that to find any sort of meaningful hoax indicators (costume fasteners of any sort) in the P/G film, or any film/video for that matter, then the subject could not be any more than about 25 feet away, and a very good camera would be needed (not a point-and-shoot or cell phone camera). This is very unlikely to occur. Getting that close to a sasquatch and then taking a photograph/video has almost lottery odds, mainly because a sasquatch would not allow one to get that close.

As a result of this, we have a Catch 22 situation. We cannot prove a subject is a hoax, and we cannot prove it is real because hoax indicators cannot be seen even if they were there. Also keep in mind that such indicators would be skillfully concealed in any professionally made costume.

We must therefore depend on other less decisive indicators to judge whether or not a creature seen is a natural being (not a hoax).

The first major consideration as to the P/G film is that whatever was filmed had to have a walking height of 7 feet 3.5 inches-not impossible for a human, but very unlikely. The next is that its arms and legs proportions would have to be essentially outside those of any known human. When these factors are taken in conjunction with the many other observations I have provided, then the decision as to Patty's reality moves from a POSSIBILITY to a PROBABILITY. In other words, the creature we see in the P/G film is probably what we believe to be a sasquatch or bigfoot. This is absolutely as far as we can take the argument. Bones, a body, or part thereof, must be obtained to prove beyond a doubt that sasquatch exist.

## What Books Do We Have on the P/G Film?

 Prior to filming Patty at Bluff Creek, California, in October 1967, Roger Patterson had written a book entitled, Do Abominable Snowmen of America Really Exist? (Franklin Press, 1966). The entire book is provided in The Bigfoot Film Controversy (Hancock House Publishers, 2005). A supplement I wrote is also provided in this work which details the events that took place, the authoritative conclusions on the film, and the hoax claims.

In about 1998, I commenced a diligent study of the P/G film circumstances and its aftermath. My study resulted in Bigfoot Film Journal (Hancock House Publishers, 2008). This work is provided as both an ebook (free download) and a printed book. It contains numerous links to actual document images that support and/or augment the information provided.
Although there are, and will always be, questions on the film circumstances, what we know is provided in this work


Having researched the sasquatch/bigfoot phenomenon for over 20 years, I can say without any reservations that the major researchers/authors have never stated anything but the truth as they know it. Indeed, they are more skeptical than the skeptics. As to the many claims of misinformation, hidden agendas and so forth, all I can say here is, "paper does not refuse ink."

Please visit the Hancock House section to obtain these books and other fine titles on the sasquatch/bigfoot issue.

[^1]
[^0]:    MATH: Blue line is 3.958 ; Red line is 3.813 ; Red line is $3.813 / 3.958=96.34 \%$ of blue line; Actual fragment size is 26.25 inches; Visible fragment size is $\left(26.25^{*} .9634\right)=25.289$ inches. Fragment in the image (yellow line) is 0.578 inches. However, it is on an angle and if made straight (pink line) it would be 0.611 inches. Ratio is $25.289 / .611=41.39$ image inches to actual inches. Patty's height in image is (light green line) is 2.192 inches. Patty's actual height is therefore $41.39 * 2.192=90.73$ inches tall.

[^1]:    (Photographs of "Patty" used in this presentation are under copyright owned by Erik and Martin Dahinden.)

